Evaluation of Grass Display Plots Treated with Plateau® Herbicide Loren St. John, Aberdeen Plant Materials Center

The purpose of this evaluation was to observe the effects of Plateau® Herbicide on established perennial grasses that had been burned. The evaluation was conducted during the 2001-growing season at the display nursery located at the Plant Materials Center (PMC) Home Farm. The display nursery was seeded in August 1995 and includes 54 accessions of perennial grasses adapted to the Intermountain Region. The plots were burned in August 2000 to remove standing cover and to simulate a wildfire. Dr. Pamela J.S. Hutchinson, Weed Scientist at the University of Idaho Agricultural Experiment Station, Aberdeen, sprayed the north half of each plot with 10 ounces Plateau per acre plus one quart per acre methylated seed oil (MSO) on October 27, 2000. Plateau herbicide is an aqueous solution mixed with water and adjuvant and applied as a spray solution to provide weed control on non-cropland areas (including Conservation Reserve Program Land) and for weed control during the establishment of native grasses.

Plots were evaluated on May 14 and June 28, 2001 for plant height and vigor. The plots were clipped at the end of June 2001 to collect forage yield and quality data. Forage samples were sent to the Coffeville Mississippi PMC for forage quality analysis. The samples were analyzed for total digestible nutrients (TDN), nitrogen, protein, acid detergent fiber (ADF) and neutral detergent fiber (NDF).

Plant height was reduced 40 to 60 percent by the application of the herbicide. Dry matter forage yield was reduced 30 to 60 percent and the herbicide application killed 'Johnstone' tall fescue and 'Bromar' mountain brome. TDN for the non-sprayed (control) plots averaged 58 percent and 67 percent for the sprayed (treated) plots. ADF which is an estimate of digestibility averaged 37 percent for the control plots and 33 percent for the treated plots (as ADF increases, the digestibility decreases). NDF for the control plots averaged 64 percent and 58 percent for the treated plots also indicating improved forage quality as a result of the herbicide application. The herbicide application delayed initial spring growth and the forage in the treated plots was finer stemmed and less coarse which corresponded to the forage quality analysis.

Observations of the plots this spring (2002) show no obvious after affects of the herbicide application. The plots will continue to be monitored.

I thank Dr. Hutchinson for her work and cooperation and Lindle Offenbacker, Soil Conservationist at American Falls for his work in evaluating and clipping the plots, summarizing the data and preparing the detailed report. The report may be obtained by contacting me at the Plant Materials Center, phone (208) 397-4133.

The use of the Product name is for information and does not imply endorsement by USDA-NRCS over other equivalent materials.

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